

**Regional Water Quality Control Board  
Central Valley Region  
Board Meeting – 11/12 June 2009**

**Response to Written Comments Response to Written Comments for General Electric  
Company and Wellmade Products Company, Groundwater Cleanup System  
Merced County  
Tentative Waste Discharge Requirements/NPDES Permit**

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At a public hearing scheduled for 11/12 June 2008, the Regional Water Quality Control Board, Central Valley Region (Regional Water Board) will consider adoption of renewed Waste Discharge Requirements (WDRs) (NPDES No. CA0081833) for General Electric Company (GE) and Wellmade Products Company, Groundwater Cleanup System. This document contains responses to written comments received from interested parties regarding the Tentative Waste Discharge Requirements (TWDRs) circulated on 15 April 2009. Written comments from interested parties were required by public notice to be submitted to the Regional Water Board by 5:00 pm on 15 May 2009 to receive full consideration. Written comments were received from:

1. California Department of Fish and Game
2. General Electric Company, submitted by amec on behalf of GE.

Written comments from the above interested parties are summarized below, followed by the response of the Regional Water Board.

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**CALIFORNIA DEPARTMENT OF FISH AND GAME (DFG) COMMENTS**

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**DFG – COMMENT:** DFG recommends the TWDRs require GE to hold the discharge until laboratory results of effluent samples have been received and reviewed for compliance.

**RESPONSE:** The federal Clean Water Act and California Water Code authorize discharges of pollutants/wastes to surface waters. These discharges are regulated by NPDES Permits/WDR that include discharge prohibitions, effluent limitations, and monitoring requirements. Discharges that violate permit requirements are subject to enforcement actions.

NPDES Permits/WDRs usually authorize continuous discharges, and only in special circumstances require dischargers to hold treated effluent discharges until monitoring results are returned. In the case of the existing discharge, the volume of storage necessary to implement the DFG request is cost prohibitive and unnecessary given the type and reliability of treatment systems and their historic performance and record of compliance.

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**GENERAL ELECTRIC COMPANY (GE) COMMENTS, 14 May 2009**

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**GE – GENERAL COMMENT No. A.** GE obtained from Water Board staff on 13 May 2009 a letter providing conditional approval to permanently shut down the 100-foot zone extraction and treatment system and its associated discharge. The letter indicates that the extraction and treatment system may be required if concentrations of volatile organic compounds (VOCs) in

the 100-foot zone aquifer increase. GE requests that all references to the 100-foot zone be removed except for a short explanation in the Fact Sheet. GE states that if further remedial action is required, it will evaluate its options at that time.

**RESPONSE:** Generally, the requested changes have not been made. Should GE need to perform additional remedial action in the 100-foot zone, it will have a discharge permit in place to do so. Water Board staff have modified Attachment E, Monitoring and Reporting Program, so that it explicitly states that GE is not required to monitor discharges from shut-down treatment systems. Water Board staff have also modified the Fact Sheet to explain the status of the shut-down systems.

**GE – GENERAL COMMENT No. B.** GE comments that Regional Water Board staff has indicated that multizone treatment system monitoring (Discharge 002) and discharge sampling will not be necessary during treatment system shutdown approved in accordance with the 24 March 2009 Water Board staff letter. GE indicates it will remove the extraction well so it can be sampled using a portable pump.

**RESPONSE:** No response required.

**GE – GENERAL COMMENT No. C.** GE notes that the existing permit does not require receiving water monitoring if the discharge represents the entire flow in the receiving waters. GE requests similar language be included in the TWDRs.

**RESPONSE:** .The change has been made.

**GE – GENERAL COMMENT No. D.** GE states that the existing permit contains a finding that treated water has been used when installing extraction and monitoring wells and washing site equipment. GE notes that such uses are approved in the prohibition section of the existing Order. GE requests similar approval in the TWDRs.

**RESPONSE:** Finding II.B. has been changed so that in conjunction with Prohibition III.A GE has approval to use treated water when installing extraction and monitoring wells and washing site equipment.

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**GE – SPECIFIC COMMENT Nos. 1, 2, 31, and 32:** GE asks for corrections in facility contact information and owner/operator descriptions.

**RESPONSE:** The changes have been made.

**GE – SPECIFIC COMMENT Nos. 3 and 34:** GE comments that Finding II.B. and Fact Sheet Section III.C.1 incorrectly apply beneficial uses to Hartley Canal using the Basin Plan's tributary rule. GE states that water contact recreation (REC-1) and non-contact water recreation (REC-2) uses are illegal in irrigation canals. GE also states that MIGR (warm and cold water migration of aquatic organisms) is physically blocked by numerous weirs and other obstructions in the canal, and that the beneficial uses of Hartley Canal are limited to municipal and domestic supply (MUN), agricultural supply (AGR), industrial process supply (PRO), warm fresh WARM, SPWN, and WILD.

**RESPONSE:** As described in the Findings and Fact Sheet, Hartley Canal discharges to Miles Creek, which discharges to the San Joaquin River. The designated beneficial uses of the San Joaquin River include municipal and domestic supply (MUN); agricultural supply (AGR); industrial process supply (PRO); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD). These uses are applicable to Miles Creek pursuant to the Basin Plan's tributary rule. Although the beneficial uses of Hartley Canal are not specified in the Basin Plan, the quality of water in the Canal must be protective of downstream beneficial uses. In addition, fishable/swimmable uses presumptively apply to Hartley Canal (Order WQO 2005-0004 [*Ballona Creek*], p. 6), and MUN applies unless that use is removed through a basin planning action.

Removal of the references to REC-1, REC-2, and MIGR beneficial uses from the list of beneficial uses associated with Hartley Slough will have no bearing on the requirements of the TWDRs, because: Hartley Slough is an effluent dominated water body and the discharge must be of sufficient quality to protect the beneficial uses Hartley Slough obviously does have (e.g., MUN, WARM, etc.), and the discharge must be of sufficient quality to protect the beneficial uses of downstream waters. The Findings and Fact Sheet, however, have both been modified to provide clarity.

**GE – SPECIFIC COMMENT No. 4:** GE comments that REC-1, REC-2, and MIGR beneficial uses should be removed from Table 5.

**RESPONSE:** See response to Comment No. 3.

**GE – SPECIFIC COMMENT No. 5, 38, and 39:** GE requests that references to carbon tetrachloride in Effluent Limitations section IV.A.1.e. and Attachment F, Fact Sheet, sections IV.D.2.d. and section VI.B.2.a. be removed consistent with the RPA and TWDR anti-backsliding findings.

**RESPONSE:** The changes have been made.

**GE – SPECIFIC COMMENT Nos. 5, 17, 18, 19, 20, 27, 35, 37, 38, and 39:** GE states that chloroform has not been detected at a treatment system well since 1996 and, based on this, requests chloroform be removed from the following sections of the TWDRs: Effluent Limitation section IV.A.1.e; Attachment E, Monitoring Requirements, effluent monitoring and mid-treatment monitoring; Attachment F, Fact Sheet, Table F-5, Summary of Technology-based Effluent Limitations and Table F-6, Summary of Final Effluent Limitations; and Attachment F, Fact Sheet, sections IV.D.2.d and section VI.B.2.a.

**RESPONSE:** The references to chloroform have not been removed from the TWDRs. The TWDRs, Effluent Limitations IV.A.1., includes a technology based effluent limitation for chloroform that was carried over from the previous permit. Chloroform is a VOC that was detected in Facility monitoring wells at least three times during the existing permit term and has a reasonable likelihood of being pulled into the treatment system. Removal of the limitation would constitute backsliding. Further 40 CFR Section 122.44(i)(1)(i), requires monitoring for all constituents for which there is an effluent limitation.

**GE – SPECIFIC COMMENT No. 6:** GE requests removal of Receiving Water Limitations V.A. Nos. 1 (Bacteria), 2(Biostimulatory Substances), 3(Chemical Constituents), 9(Pesticides), 11(Suspended Sediments), 12(Settleable Material), and 13(Suspended Material). GE states that none of the substances are constituents of concern associated with the treatment system and were not included in the current permit.

**RESPONSE:** The subject receiving water limitations have not been removed as they are associated with the water quality objectives in the Basin Plan and apply to all receiving waters.

**GE – SPECIFIC COMMENT No. 7:** Reopener Provision, Section VI.C.1.a., requires GE to conduct a special study to provide data for an expanded reasonable potential analysis for arsenic, manganese, mercury, and selenium. GE notes that the length of time for monitoring these constituents is not clear and provides language suggesting that the monitoring should terminate at the end of one year.

**RESPONSE:** The language provided by GE has not been applied to the Provision. However, in Attachment E, Effluent Monitoring Tables E-3, E-4, and E-5, Footnote 5 has been applied to the subject constituents. The Footnote allows GE to request a reduction in monitoring frequency after one year of data collection.

**GE – SPECIFIC COMMENT Nos. 8, 9, 10, and 43:** GE contends that the frequency of accelerated monitoring for chronic whole effluent toxicity testing (i.e., four tests in a six week period)(Provision VI.C.2.b.iv.) is unjustified based on previous chronic toxicity results, the unchanging nature of the influent and effluent, the influent and effluent is well characterized,

and there is a high probability of a false positive toxicity result. GE requests a single test to confirm the initial detection of chronic toxicity. In addition, GE requests that accelerated monitoring be required within 30 days of notification by the laboratory of a test result rather than the 14 day requirement in the TWDRs.

**RESPONSE:** Contrary to GE's statement, the purpose of accelerated monitoring is not to confirm an initial test result. Consistent with USEPA's Technical Support Document for Water Quality-based Toxics Control, the purpose of accelerated monitoring is to "determine the continued presence or absence of effluent toxicity and the magnitude of that toxicity." However, the TWDRs have been revised to require a single accelerated chronic toxicity monitoring test for the following reasons: past chronic toxicity data indicate there is no pattern of toxicity, the influent and effluent are well characterized, and there is low variability in the influent. The TWDRs require GE to initiate a Toxicity Reduction Evaluation (TRE) if toxicity is exhibited in the single accelerated test. Notwithstanding the results of the accelerated test result, the TWDRs continue to state that the Executive Officer may require a TRE if there is adequate evidence of a pattern of effluent toxicity. Attachment F – Fact Sheet was modified to be consistent with the changes noted above.

The TWDRs have not been revised to allow 30 days to initiate accelerated monitoring. The 14 day requirement is consistently met by other NPDES dischargers.

**GE – SPECIFIC COMMENT Nos. 11 and 12:** GE states that Provision VI.C.2.b.iv.c does not allow enough time to submit a TRE Action Plan nor does it allow sufficient time to obtain approval of the action plan and implement the action plan before the TRE Work Plan is due.

**RESPONSE:** The requirement to submit a TRE Action Plan has been removed from the TWDRs. The TRE Action Plan appeared to duplicate efforts required by the Initial Investigative TRE Work Plan and the full TRE Work Plan. If the result of the accelerated chronic toxicity test exceeds the monitoring trigger, the TWDRs require GE to submit a TRE Work Plan, including an implementation schedule, within 60 days of notification by the laboratory of the test results.

**GE – SPECIFIC COMMENT No. 13:** GE comments that Effluent Limitations, Section VII.A., Compliance Determination, of the TWDRs does not appropriately acknowledge that some of the Method Limits (MLs) in the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) exceed 0.5 ug/L and requests that the section be changed accordingly.

**RESPONSE:** The applicable language has been modified.

**GE – SPECIFIC COMMENT No. 14:** .GE asks for a correction to Attachment C – Flow Schematic.

**RESPONSE:** The correction has been made.

**GE – SPECIFIC COMMENT Nos. 15 and 16:** GE asks for modifications to specific Attachment D, Standard Provisions.

**RESPONSE:** The modifications have not been made. Attachment D, Standard Provisions, is attached to all individual NPDES permits. Standard Provisions that obviously apply to publicly owned treatment works (POTWs) do not apply to the GE discharge.

**GE – SPECIFIC COMMENT Nos. 17, 18, 19, 20 regarding *trans*-1,2-dichloroethylene (*trans*-1,2-DCE):** GE states that *trans*-1,2-DCE has not been detected at a treatment system well since 1984, and based on the infrequency of detection, *trans*-1,2-DCE should be deleted from the Attachment E, Monitoring and Reporting Requirements, effluent and mid-treatment monitoring tables and from Fact Sheet Section IV, Table F-5 and Table F-6.

**RESPONSE:** The monitoring requirement has not been changed. TWDRs, Effluent Limitations IV.A.1., includes a technology based effluent limit for *trans*-1,2-DCE that was carried over from the previous permit. *Trans*-1,2-DCE is a breakdown product of the site's main constituent of concern and removal of the limit would be backsliding. 40 CFR 122.44(i)(1)(i), requires monitoring for all constituents for which there is an effluent limitation.

**GE – SPECIFIC COMMENT Nos. 17, 18, 19, 20, 27 regarding “Footnote 1”:** GE notes that Attachment E, Section III, Table E-2, Footnote 1 indicates a practical quantitation limit (PQL) of 0.5 ug/L is achievable for the volatile organic chemicals specifically named in the table. However, it is not achievable for all constituents listed in the SIP. GE requests the footnote be deleted from the row “Other VOCs” in the table. Similar footnotes are included in Attachment E, Table E-3 Footnote 6), Table E-4, (Footnote 6), Table E-5, (Footnote 6), and Table E-8 (Footnote 1) for which GE requests similar treatment.

**RESPONSE:** The footnotes have not been removed. Rather, they have been modified to require use of the lowest MLs in the SIP.

**GE – SPECIFIC COMMENT Nos. 17, 18, 19, 20, 26, 27 regarding “Footnote 3”:** GE notes that Attachment E, Section III, Table E-2, Footnote 3 indicates analyses should include all constituents included in Appendix 4 of the SIP. However, as described in the approved Operation and Maintenance (O&M) Plan, two constituents included in the SIP (acrolein and acrylonitrile) cannot be detected by the approved analytical method (EPA Method 8260). GE requests the footnotes be modified to read: “All typical volatile organic constituents listed in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) as noted in the

approved O&M Plan.” Similar footnotes are included in Attachment E, Table E-3 (Footnote 8), Table E-4, (Footnote 8), Table E-5, (Footnote 8), Table E-7 (Footnote 2), and Table E-8, (Footnote 3) for which GE requests similar treatment.

**RESPONSE:** The footnotes have been modified in a fashion similar to the request.

**GE – SPECIFIC COMMENT Nos. 18, 19, 20, 40 and 41 regarding the increase in priority pollutant monitoring:** GE requests that the frequency of effluent priority pollutant sampling to once per permit cycle given the nature of the discharge and consistency of the effluent.

**RESPONSE:** The monitoring frequency has been reduced as requested but moved to the first year of the permit cycle. Should results indicate the need for more frequent sampling, it will be required by Executive Officer 13267 Order. Discussion in the Fact Sheet has been modified appropriately.

**GE – SPECIFIC COMMENT No. 21:** GE requests that the requirement to record the total residual chlorine concentration when collecting an acute toxicity sample be removed (Attachment E, Section V.A.4.). Reportedly the discharge is not treated with chlorine containing chemicals.

**RESPONSE:** The requirement in Attachment E, Section V.A.4. to record total residual chlorine has been removed from the TWDRs.

**GE – SPECIFIC COMMENT No. 22:** GE requests that the final two sentences in Attachment E, Section V.B.2 be deleted. The final two sentences require GE to collect a receiving water control sample for chronic toxicity testing. However, GE’s justification for the request is that receiving water should not be used as the diluent due to an effect known as acclimatization.

**RESPONSE:** Water Board staff re-evaluated the purpose of the chronic toxicity testing and determined the purpose of the testing is to estimate the absolute chronic toxicity of the effluent as the receiving waters are frequently effluent dominated. With this stated purpose, USEPA’s Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, October 2002 (EPA-821-R-02-013) states that a synthetic (standard) dilution water should be used. The TWDRs have been revised to require GE to use laboratory water for the control and the diluent.

**GE – SPECIFIC COMMENT No. 23:** GE states that the requirement (Attachment E, Section V.D.1.) to submit chronic toxicity monitoring results within 30 days following completion of the test is redundant when toxicity is detected and unnecessary when no toxicity is found. GE requests that regular toxicity results be submitted to the Water Board in the applicable quarterly self-monitoring report.

**RESPONSE:** Attachment E, Section V.D.1 contains the only requirement in the TWDRs to submit comprehensive chronic toxicity results. In the event the results indicate toxicity, Water Board staff need the comprehensive results in a timely manner to verify whether accelerated monitoring or a TRE is appropriate. Thus, the TWDRs have not been changed for those tests that exceed the monitoring trigger and accelerated monitoring results. For those cases where the results show no chronic toxicity, the TWDRs have been modified to require GE to submit the results along with the Annual Operations Report (due 1 February).

**GE – SPECIFIC COMMENT No. 24:** GE objects to the Attachment E, Section V.D.1 requirement to submit an updated chronology of chronic toxicity test results with monthly self-monitoring reports. GE believes the requirement is redundant with other provisions. GE also points out that the TWDRs do not require monthly self-monitoring reports.

**RESPONSE:** The requirement to submit an updated chronology of chronic toxicity test results has not been removed from the TWDRs. No other provision in the TWDRs requires a chronology of the chronic toxicity data. A chronology allows Water Board staff to identify whether there appears to be a pattern of effluent toxicity without having to dig through years of archived reports.

GE correctly points out that the TWDRs require quarterly self-monitoring reports rather than monthly. The TWDRs have been modified accordingly.

**GE – SPECIFIC COMMENT No. 25:** GE states that the requirement (Attachment E, Section V.D.2.) to submit acute toxicity monitoring results within 30 days following completion of the test is redundant and unnecessary. GE requests that acute toxicity results be submitted to the Water Board in the applicable quarterly self-monitoring report.

**RESPONSE:** The requested change has not been made. Reporting acute toxicity results as percent survival is not onerous, and Attachment E, Section V.D.2 provides the only place in the TWDRs that provides an explicit requirement to submit the acute toxicity results.

**GE – SPECIFIC COMMENT No. 26:** GE requests that a footnote be added to Attachment E, Section VIII, Table E-7 to recognize that receiving water monitoring is not required when the discharge comprises the only flow in the receiving waters.

**RESPONSE:** A new section has been added to Attachment E, Section I, General Monitoring Provisions, to specify that receiving water monitoring is not necessary under the specified conditions.



**GE – SPECIFIC COMMENT No. 28:** Regarding Attachment E, Monitoring and Reporting Provisions, Section X.A.3.b, GE states that it reports estimated values of results less than the RL but greater than the MDL as “J” values with the explanation that this reporting is equivalent to DNQ. GE reportedly has contacted several laboratories regarding the use of the nomenclature “DNQ” and has not found it to be available in standard laboratory reports. GE requests the section be changed to allow for reporting alternative reporting nomenclature.

**RESPONSE:** The change has not been made. The reporting requirements are required by the SIP.

**GE – SPECIFIC COMMENT No. 29:** GE notes that Attachment E, Section X.A.4., is not relevant to the monitoring of this groundwater cleanup site. GE requests the section be deleted.

**RESPONSE:** The change has been made.

**GE – SPECIFIC COMMENT No. 30:** GE requests that Attachment E, Section X, Table E-9, be modified to be consistent with the requested reductions in priority pollutant monitoring frequency.

**RESPONSE:** The table has been modified appropriately.

**GE – SPECIFIC COMMENT No. 33:** GE points out corrections to Attachment F, Section II.B.1. longitude notations.

**RESPONSE:** The requested corrections have been made.

**GE – SPECIFIC COMMENT No. 36:** GE states that the comparison of mercury data in Attachment F, Section IV.C.3.f. incorrectly compares total mercury concentrations to dissolved criteria. GE requests amendment of the comparison.

**RESPONSE:** The change has not been made; the total mercury results are approximately compared to the total human health CTR criteria.

**GE – SPECIFIC COMMENT No. 42:** GE requests that the sentence referencing seasonality in Attachment F, Section VII.B.2.a be eliminated and replaced with the following: “Accelerated monitoring will be conducted in accordance with a work plan approved by the RWQCB.” GE maintains that there is no evidence of seasonality in the data referenced in the Attachment F – Fact Sheet.

**RESPONSE:** The sentence referencing seasonality in Attachment F, Section VII.B.2.a has been removed. Chronic toxicity data submitted to date does not show any seasonality.

The requested replacement sentence was not inserted into the TWDRs. Refer to Specific Comment Nos. 8, 9, 10, and 43 regarding accelerated chronic toxicity monitoring.

**GE – SPECIFIC COMMENT No. 44:** Regarding the Fact Sheet, Section VII.B.3.a., GE states that it does not use additives for pH adjustment and the example provided should be deleted.

**RESPONSE:** The change has not been made. GE's *Workplan for the Treatment and Disposal of Waste Generated by Airstripper Tower Cleaning* indicates GE uses NaOH for pH adjustment.

**GE – SPECIFIC COMMENT No. 45:** GE states that the Attachment G, Discharge Point 001 – RPA for Other Pollutants of Concern, the Maximum Effluent Concentration for iron is lower than the applicable water quality objective. GE states the RP conclusion should be no RP instead of indeterminate.

**RESPONSE:** The conclusion is unchanged. The RPA does not conclude that there is no reasonable potential because a receiving water sample exceeded the applicable water quality objective and iron was detected in the effluent (SIP second trigger). The conclusion is indeterminate because the receiving water result that exceeded the objective appears to be an outlier.